ISSUE 06/11

Wickes

GOOD IDEA LEAFLET 46

INSTALLING WICKES SHOWER BOOSTER PUMPS

A major problem confronting anyone wishing to install a shower in their home, either over a bath or in a separate cubicle, is ensuring sufficient water pressure to operate the shower satisfactorily. Most people expect a shower to deliver a strong invigorating spray rather than just a trickle of water.

All too often it is found that although water pressure is adequate at bath and basin taps, once a shower is fitted, with the spray head higher than other outlets, the pressure at the spray head is totally inadequate.
This is due to the spray head being too close to the water level in the cold water storage tank. Most showers will not perform unless there is a minimum height of 1 metre between the spray head and the water level in the tank. This is called the head of water. The higher the head the greater the water pressure.

There are three ways to increase the pressure so that you obtain the shower that you desire.

ONE is to raise the cold water storage tank which feeds the hot water cylinder and the majority of cold water outlets, thus increasing the head. This involves building a platform in the loft and raising the tank to achieve the extra head or pressure. Plumbing pipework has to be extended and making this a laborious job. In many lofts such a change would not even be practical.

TWO is to fit an entirely independent instantaneous shower heater, fed with cold water from the rising main. The rising main will generally have considerably greater pressure. The heater itself can limit performance since the flow is controlled by the time it takes to heat the water to the required temperature. Whenever someone runs the tap in the kitchen, also fed from the rising main, or when the cold water storage tank needs replenishing, water pressure will also drop. There is no way that water pressure can be boosted through a mains water fed instantaneous shower heater.

THREE, and by far the best answer, is to install a twin impeller shower booster pump. There are four different twin impeller pumps in the Wickes range and are as follows:

Plastic Twin Impeller Pumps SKU: 200-206 (1.5 bar) SKU: 160-510 (2 bar)

- Increases flow rate to up to 16 litres per minute (1.5 bar) / 25 litres per minute (2 bar)
- Designed for intermittent use - 20 minutes on / 40 minutes off
- Transforms a new or existing shower into a power shower
- Fully automatic
- Increases the effective head by the equivalent of up to 12 metres (1.5 bar) / 20 metres (2 bar)
- Quiet operation

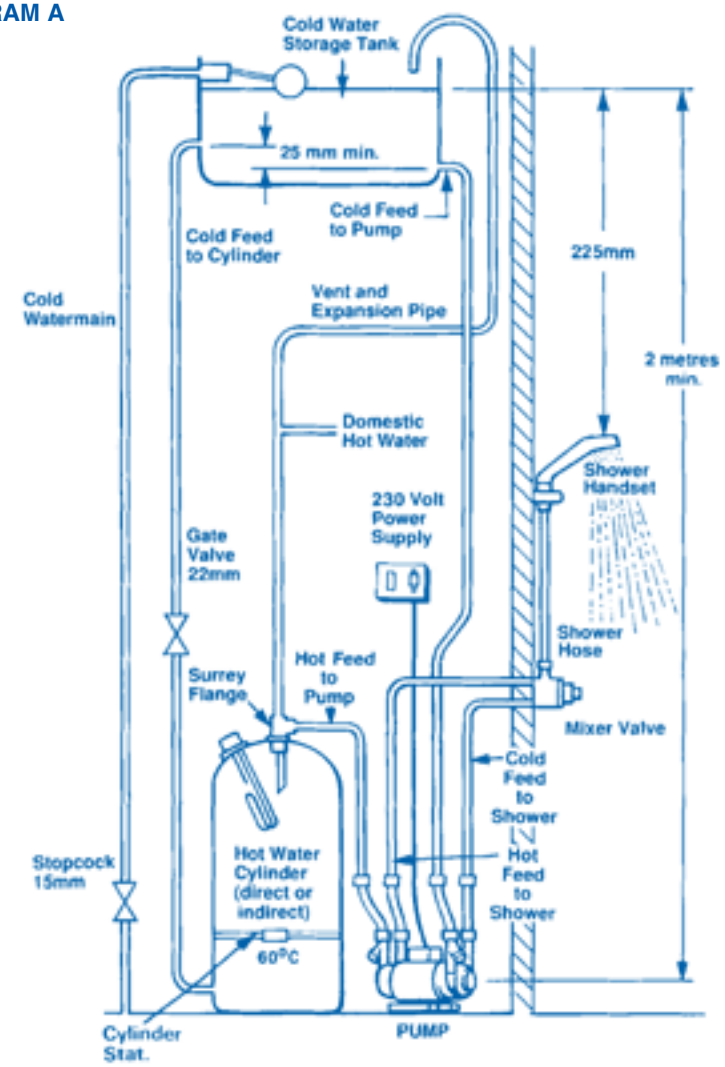
High Performance Brass Twin Impeller Pumps SKU: 410-036 (2 bar) SKU: 160-404 (3 bar)

- Increases flow rate to up to 25 litres per minute (2 bar) / 40 litres per min (3 bar)
- Designed for frequent / continuous use in domestic and light commercial installations
- Increases the effective head by the equivalent of up to 20 metres (2 bar) / 30 metres (3 bar)
- Can power both a main bathroom and an en-suite
- Supplied with four high quality stainless steel braided hoses
- Adjustable flow switch sensitivity
- Quiet operation
- Integral stainless steel inlet filters

KEEP INFORMED

- Look for other Good Idea Leaflets that could help you with your current project.
- Check that your Good Idea Leaflets are kept up to date. Leaflets are regularly changed to reflect product changes so keep an eye on issue dates.
- If you would like to be put on our mailing list for the Wickes Catalogue call:
  0845 274 1000
- Visit our website
  wickes.co.uk

DIAGRAM A

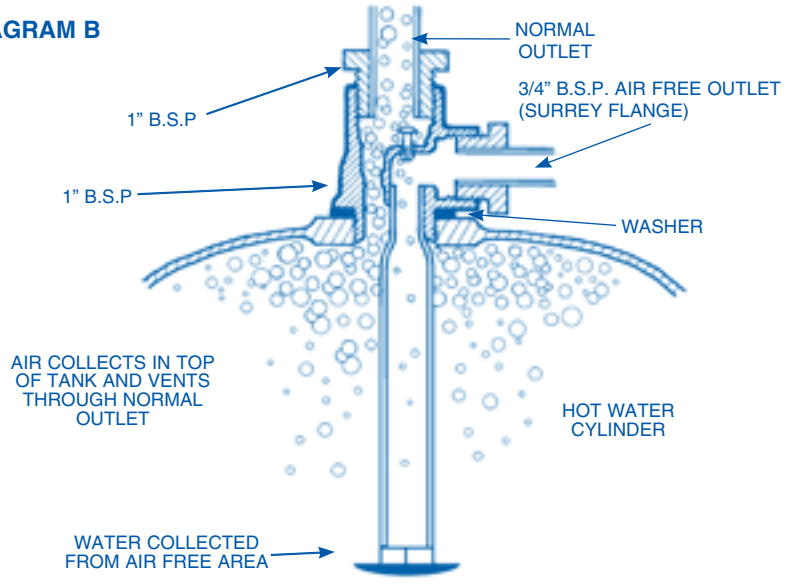


Schematic Diagram with Brass Pump shown

The pumps are completely automatic once installed so you do not have to switch them on and off when you decide to have a shower. As soon as the controls to the shower are turned on and water flows through the pipework, an in-built flow sensor opperates, switching on the pump. The only requirement here is that the unboosted flow rate from the shower spray head, when at its highest point, must be a minimum of 0.5 litres of water per minute. This is normally the case when the spray head at its highest point is not less than 225mm below the water level in the storage tank supplying both the hot and cold feeds.
See **Diagram A.**

Twin impeller pumps are particularly suitable for installations where access cannot be gained to pipework directly adjacent to the shower, between the mixer and sprayhead, because it is embedded in the walls, the situation in most homes. Connections are made to the supply hot and cold pipework before it reaches the mixer valve. The pumps can also be installed to boost supplies to other outlets in the house, such as the bath and basin shown in **Diagram C**.

DIAGRAM B



BEFORE YOU START

There are a few requirements which must be adhered to if the Wickes Shower Booster Pumps are to operate satisfactorily and safely.

The existing water supply to the shower should be of equal pressure on the hot and cold side. This means that both hot and cold water must come from the same source, a cold water storage tank. Refer to **Diagram A** which indicates the pipe layout. In most systems it is usual for the same cold water storage tank to feed both the hot water cylinder and the cold taps, so pressure is normally equal. The cold supply should not come directly from a rising main since the pressure may fluctuate and will generally be greater than the pressure from a cold water storage tank.

Pipework should be 22mm as far as possible to reduce flow resistance. 22mm pipe is normally used for the supply from the cold storage tank to cold water feed pipes and the feed pipe to the hot water storage cylinder. Do not reduce to 15mm pipe until it becomes necessary.

The booster pump must always be sited with the pipe outlets pointing vertically upwards. To prevent air being drawn down the hot water storage cylinder vent pipe and into the system, and to ensure that the shower has a hot water supply that cannot be affected by water being drawn off elsewhere, we strongly recommend that the hot supply to the pump is via a 'Surrey Flange' which is fitted to the top of the cylinder. **Diagram B.**

The Surrey Flange stocked by Wickes is supplied with full fitting instructions. Product Code 421-901. Diagrams in this leaflet show the hot supply coming from the Surrey Flange rather than from a normal flow pipe at the top of the cylinder.

Important
Flexible hoses must always be used to link both the incoming and outgoing pipes to the pump. Some pump vibration is inevitable and the flexible hoses help reduce the noise of such vibration and damage to the pump.

The High Performance Brass Pumps (410-036 and 160-404) are supplied with four high quality stainless steel braided hoses. You will require four 22mm compression connectors for the hose standpipe ends.

The 1.5 bar plastic Twin Impeller Pump (200-206) requires two pairs of flexible hoses incorporating isolating valves to be purchased separately (414-802).

The 2 bar Plastic Twin Impeller Pump (160-510) is supplied with these hoses.

All plumbing work must comply with the requirements of Water Supply bye-laws.

All electrical works **MUST** conform to **BS767** the current **IEE** Wiring Regulations and **Part P** of Building Regulations. You are advised to check with your local authority's Building Control Department, or an Authorised Competent Person, before starting. If in any doubt about electrical work, call in a qualified electrician.

PROJECT SHOPPING LIST

Items associated with the installation of a Shower Booster Pump are listed below.

Make your own 'picking list' for use in the store by filling in the 'I need' column.

Product Description	Product Code	I need
1.5 Bar Plastic Twin Impeller Shower Booster Pump	200-206	
Pair of Flexible hoses (Two pairs for twin impeller pump, 410-042)	414-802	
2 Bar Plastic Twin Impeller Shower Booster Pump*	160-510	
2 Bar High Performance Brass Twin Impeller Pump*	410-036	
3 Bar High Performance Brass Twin Impeller Pump*	160-404	
DP fused connection unit	710-027	
Surrey Flange	421-901	
15mm and 22mm copper pipe and fittings		
2.5mm² twin and earth cable		

*supplied with 4 flexible hoses

WORK SEQUENCE

FITTING THE TWIN IMPELLER PUMP

1. Read the instructions
2. Position the pump
3. Run pipework to and from the pump
4. Electrical connections

Positioning the pump.
Position the pump so that it can be easily reached for servicing purposes this will save you time and trouble later on.

The location of the pump will depend, to some extent, on where hot and cold feed pipes are accessible and also on whether the shower only is to be served or other outlets are to be boosted as well. If, for example, the pump is solely for use with the shower, the preferred method is to have a dedicated supply. If, however, other outlets do require boosting, the pump must be linked in to the main pipework before the branches to those outlets. See **Diagram C.**

With these factors in mind find a place for the pump where suitable connections can be made, ideally in the bottom of the airing cupboard. Under the bath or some similar location adjacent to the shower area is acceptable but it should not be sited where it could be splashed or touched.

The pump sits on rubber 'buffer' pads to reduce vibration noise, and **must not** be screwed down to the floor.

Use one end of the pump for the hot water, the other for the cold. When fitting this pump remember that you will require two sets of flexible pipe connectors. One flexible connector from each pair is used to connect to the pump inlets, the other for the connection to the outlets.

Pipe clips should not be used within 450mm of the pump, and plastic clips are recommended elsewhere. Metal pipe clips should be avoided.
Comprehensive fitting instructions are supplied with the pumps.

NOTE: Do not use jointing compounds, such as Boss White, since they will cause seals to leak.

If using soldered joints, do not allow flux to come into contact with plastic parts of the pump since the flux will cause corrosion and, eventually, leaks.

Electrical Connections

Electrical hazard will result if the pump is not correctly earthed. If in doubt - consult a qualified electrician or call in your local Electricity Company.

The pump must be connected to a 230 volt 50Hz supply with a switched spur fused at 5 amps. The switch must have a double pole disconnection with a separation gap of at least 3mm.

The connecting flex must be double insulated 3 core flex of 0.75mm² area.

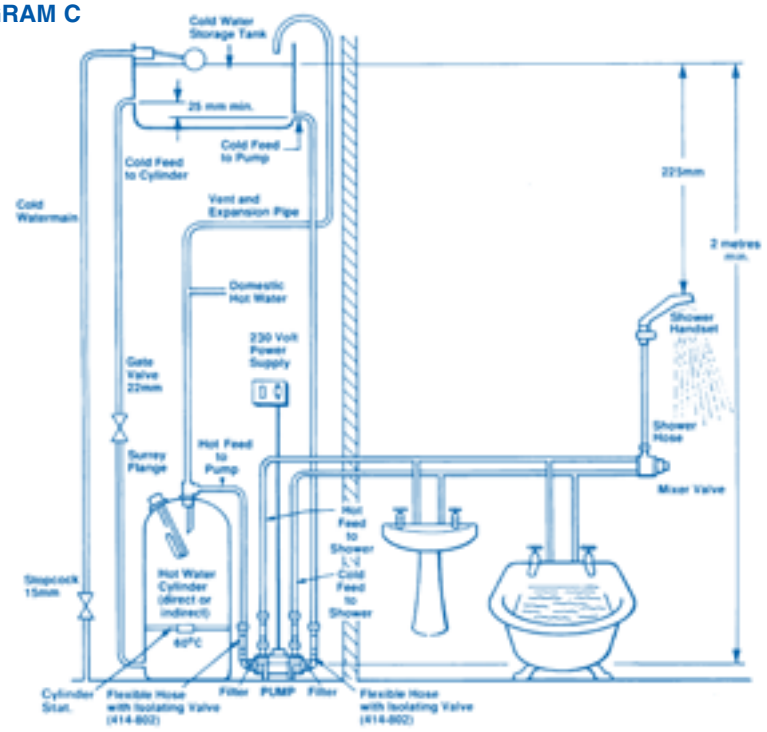
WARNING:
THIS PUMP MUST BE EARTHED

IMPORTANT
The first few times a pump is used, the insulating varnish used on the pump motor may give off an odour - this is perfectly normal and will diminish with use.

The plastic twin impeller pumps (200-206 and 160-510) are not designed for continuous use and it should be run for a maximum of 20 minutes and then rested for a minimum of 40 minutes.

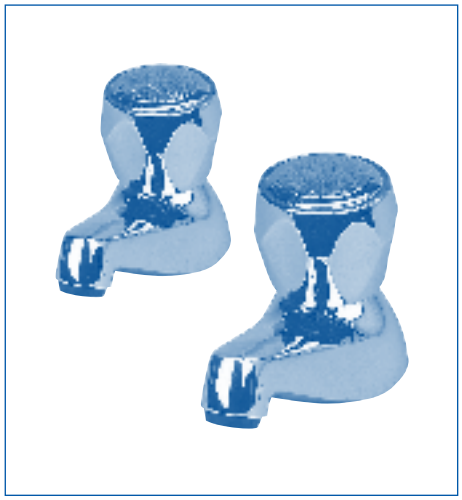
THE HELP LINE
If further advice is required, or for after sales service, please use our Helpline on 0845 2000 419.

DIAGRAM C



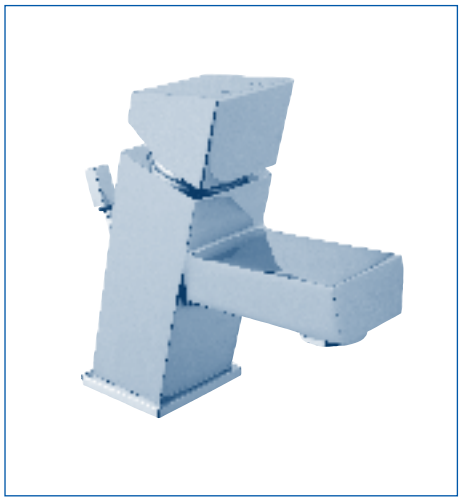
Schematic Diagram with Standard Impeller Pump shown

See in-store for a full range of Mixer Showers, Integral Power Showers and Accessories



Trade Basin Taps
410-605

Classic Bath Shower Mixer
417-600



Kuban Mono Basin Mixer
209-435

A wide range of enclosures, doors and screens also available in store

Quadrant Enclosure with 5mm Toughened Glass

Bi-fold Enclosure with 4mm Toughened Glass